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OCCUPATIONAL SAFETY AND HEALTH (OSH) PRACTICES AMONG CLEANING WORKERS IN MUNICIPAL COUNCIL

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Abstract

The aim of this study is to examine the importance of OSH practices and its relation with OSH knowledge, OSH needs, and OSH improvement needs among the cleaning workers in the Township Cleaning Service Department. 120 were randomly selected to be the respondents of this study. Data was collected through questionnaire and analyzed using Statistical Package for Social Sciences (SPSS version 19.0). The instrument was tested for correlation and regression. Results showed that there was a positive relationship between OSH knowledge, OSH needs, and OSH improvement needs with OSH practices. Regression analysis showed that only OSH knowledge has a significant influence with OSH practices. Generally, it is essential for managers and cleaning workers to take a more proactive move in developing and sustaining OSH practices in the workplace.

Field of Research: *OSH knowledge, OSH needs, OSH improvement needs, OSH practices*

1. Introduction

A range of hazards comprises of physical, chemical, ergonomic and biological hazards are around the work place and workers are at risk to the hazards. Surveys done in Canada, the United States, the Netherlands, and Denmark showed that workers employed in the cleaning services are at risk for injuries or illness such as musculoskeletal injuries from repetitive activity for example sorting and lifting, bronchitis and asthma from exposure to dusts in composting and processing, and injuries from broken glass and other sharp materials present in household solid waste. As a result of the solid waste industry characteristics, cleaning workers are exposed to more risks mainly due to little or no regulations for disposal of waste (Guertin, Mellissa & Lavoie, 2002).

Occupational safety and health (OSH) is the discipline related to protecting and caring for human and facility resources in the workplace. Standards of Occupational Safety & Health (OSH) are in general to meet the purpose of legislation. Governments have since identified that poor OSH performances linked with costs. The focus of OSH is to promote a healthy and productive workforce. In Malaysia, the Occupational Safety & Health Act 1994 was set up to remove or decrease OSH hazards and risks

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in the workplace. This Act is to provide the minimum requirement of protection for every worker in associate with the working conditions and dangers of injury, illness or death that may occur from the working atmosphere. The quest for a safe and healthier workplace for all workers is a continuing mission of the organization. Based on the progress of the country, the number of work-related accidents and occupational illnesses has elevated despite the attempt of the Government and the private sector to deal with the matters (Lee, 2000). The aspects of occupational safety and health under the scope of municipal council cleaning work should be regarded seriously to ensure that all workers and the public can live in a safer and healthier environment.

The aim of this study is to examine the safety and health practices among the cleaning workers in the Township Cleaning Service Department in Penang, Malaysia with regards to their OSH knowledge, OSH needs, and OSH improvement needs.

2. Literature Review

2.1 Safety and health practices

Prichard (2004) stated that safety and health practices in an organization are an aspect that should be nurtured as safety and health in the workplace is an obligation. Therefore, safety and health practices must be cultivated. Nevertheless, it is important to determine how the safety and health practice can be promoted with positive impact. Therefore, for a workplace to have an optimistic safety and health practices, the workers must be committed to work cautiously. For instance, some of these work practices include wearing Personal Protection Equipment (PPE) such as protective clothing, helmets, goggles, rubber gloves, etc.

Dennis & Gilbert (2008) found that organizations must actively cultivating a safety and health culture at the workplace and ensure their employees are involved in it. The employees are required to adhere to safe work practices, ensure the safety of other person at work, participating in identifying risk in the daily process, and plan the daily activities with safety in mind. The involvement of the employees on nurturing a positive safety and health practice is a significant issue. O'Brien and McIlwain (1994) discovered that in order to attain positive OSH practices in the working environment, the organization must focus on the clear written health and safety program and procedure rather than the actual workplace requirements. They also found that found that clear policy statements and safety training play an important role in reducing accidents in the workplace.

2.2 OSH Knowledge

David (2003) found that safety and health policies should deal with the technical aspects of managing safety such as program and risk assessment components, specific requirements for managing safety with the necessary resources. Clough (1986) found that the effectiveness of OSH policy could be achieved by the application of effective management techniques together with the safety facilities and motivations. In theory, OSH practices can be influenced by excellent management practices. Therefore, with the implementation of the OSH policy, it is expected that organizations can be well managed and thus can reduce the occurrence of accidents on workplace. There are certain factors that may improve OSH practices in order to comply with OSH regulations.

Holt (2001) suggested that OSH training programs are a priority before initiating a high risk job as the programs assist to develop safety and health practices at the workplace. Safety and health practices

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are to comply with the legislation as it is everyone's obligation to eliminate or reduce hazard in the workplace. A study conducted by Stranks (1994) found that OSH training programs are aimed at recognition and elimination of hazards in the workplace. OSH training programs directly lead to safety and health practices that are identical to the techniques of recognition and elimination of hazards.

Research conducted by Hemmingger (2000) found that work injury in the working environment can affect in numerous ways, for example, the physical impact on the employee, more insurance costs, the disruption of the job schedule, and etc. The employees' OSH compliance is very crucial and it is most valuable to deal with the needs of the employees first by giving the suitable apparatus to do their job.

2.3 OSH Needs

Personal Protective Equipment (PPE) such as helmets, harnesses, shoes and gloves are required to be worn by all personnel during the time they are working in the field. Clough (1986) found that the use of PPE depended very much on workers' practical habits and their working environment. Therefore, he claimed that workers' attitude and their supervisors' influence the use of PPE in their workplace. He also claimed that a good housekeeping and proper use of PPE are important factors to reduce the risk of accidents. Hislop (2005) has observed that safety violations and injuries happened due to three factors: personal factors, work factors, and those factors out of worker's control. For that reason, improving these factors is mainly important to accomplish safety practices. The proper use of PPE is very much influenced by the behaviour of the workers. The behaviour of workers varies all over the world despite complying with safety regulation standards of safety practices.

Dennis and Gilbert (2008) found that the positive safety and health practices can also be influenced by rewards or incentives and compliance can be achieved through certain reinforcements. Even factors such as promotion, monetary rewards or recognition are also means to promote employees to comply with positive safety and health practices.

2.4 OSH Improvement Needs

The importance of OSH improvement needs in the workplaces seems to be increasing on a daily basis, because most of the workers are concerned with safety and health. Positive OSH practices are part of the effort to increase productivity, quality standards, efficiency and performance in work activities (Seeley, 1996). Seeley (1996) stated that increased OSH improvement needs among the workers can speed up work activities, reduce accident rates, and the overall cost of work projects. In understanding the important role of positive OSH practices in achieving organization objectives, workers are introduce to better emphasis on OSH improvement needs.

Beatriz, Camilo and Jose (2007) proposed that understanding the perception of the management and employees on the safety and health is crucial to enable the organization to identify which areas need to be improved. Management often fears about problem associated with workplace safety as solving these problem areas would involve resource allocation, planning and adjustments. Nevertheless, managers should also be concerned about profit loss and poor productivity if not react to these problem areas.

Based on the above literature, the framework for this study is as Figure 1:

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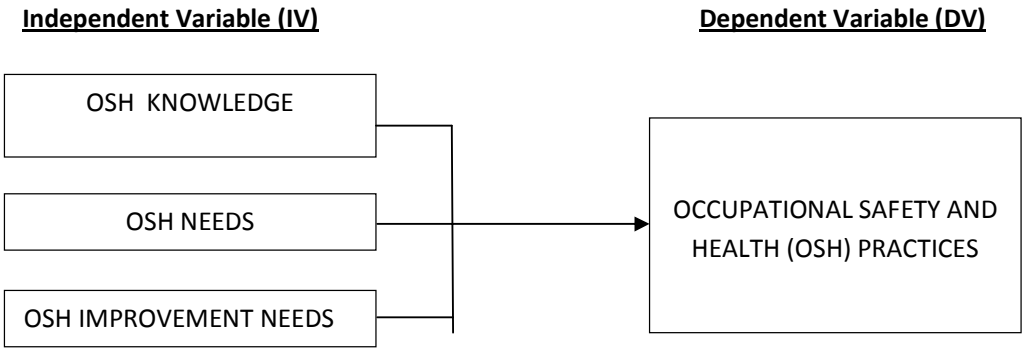

Figure 1

Research framework

Based on the research framework, the following hypotheses were developed:

i) H1: There is a relationship between OSH knowledge, OSH needs and OSH improvement needs with OSH practices.
ii) H2: OSH knowledge, OSH needs and OSH improvement needs will influence OSH practices.

3. Methodology

In this study, a total of 120 respondents were selected randomly to represent the 190 staffs who worked in the Township Cleaning Services Department. The survey involves five (5) job categories that are directly involved with cleaning activities and facing the risks and hazards related to OSH which are Senior Public Health Assistant, Public Health Assistant, Driver, Supervisor, and General Worker.

Data was collected using survey. The instrument was prepared in two languages (Bahasa Malaysia and English) using back-translation for the convenience of the respondents. Instrument consisted of demographic details such as gender, age, ethnics, length of service and level of education; knowledge on OSH which were adapted from Mazouz (2008); OSH needs from Cheah (2007); OSH improvement needs from Ormrod (1999) and OSH practices from Cheah (2007) have been used. The instrument were measured on a 5-point Likert scale ranging from 1(strongly disagree) to 5 (strongly agree).

All data collected was analyzed using Statistical Package for Social Sciences (SPSS version 19.0). In this study, descriptive statistics, correlation test and multiple regressions were undertaken.

4. Findings

4.1 Demographic data

Table 1 shows the demographic data of this study. As seen in the table, most of the respondents who took part in the research were male, single, 30 - 39 years old, 1 – 5 years of service, high school education level, and general workers.

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Table 1

Demographic data

Demographic Details (n = 120)		n	%
Gender	Male	110	91.7
	Female	10	8.3
Age	21-29 years	38	31.7
	30-39 years	39	32.5
	40-49 years	20	16.7
	≧ 50 years	23	19.2
Ethnic	Malay	93	77.5
	Chinese	3	2.5
	Indian	24	20.0
Length of Service	1-5 years	56	46.7
	6-10 years	9	7.5
	11-15 years	6	5.0
	16-20 years	15	12.5
	> 20 years	34	28.3
Level of Education	Elementary school	31	25.8
	Lower secondary school	42	3.5
	High school	44	36.7
	Pre-university	3	2.5

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Demographic Details (n = 120)		n	%
Position	General Workers	92	76.7
	Supervisor	8	6.7
	Driver	12	10.0
	Public Health Assistant	6	5.0
	Senior Public Health Assistant	2	1.7

4.2 The Reliability of the Instrument

Table 2 shows the reliability analysis for all related variables using Cronbach Alpha. The alpha scores of 0.625 to 0.808 indicate that the instrument used in this study was reliable (Sekaran & Bougie, 2013).

Table 2

Reliability Test for Independent Variables (IV) & Dependent Variables (DV)

No.	Variables	Cronbach's Alpha	No. of Items
1	OSH Knowledge (IV)	0.639	8
2	OSH Needs (IV)	0.786	11
3	OSH Improvement Needs (IV)	0.808	6
4	OSH Practices (DV)	0.625	6

4.3 Relationship between OSH knowledge, OSH needs and OSH improvement needs with OSH practices

Table 3 shows a positive correlation between OSH practices and OSH knowledge, where r = 0.428, n = 120, p = 0.000. Overall, there was a moderate positive correlation between OSH practices and OSH knowledge (42.8%). Increases in OSH practices were correlated with increases in OSH knowledge.

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Table 3 presents a positive correlation between OSH practices and OSH needs, where r = 0.394, n = 120, p = 0.000. Overall, there was a moderate positive correlation between OSH practices and OSH needs (39.4%).

There was also a positive correlation between OSH practices and OSH improvement needs as in Table 3, where r = 0.387, n = 120, p = 0.000. There was a moderate positive correlation between OSH practices and OSH improvement needs (38.7%).

Overall, there were a positive relationship between OSH knowledge, OSH needs and OSH improvement needs with OSH practices (refer Table 3). Thus, hypothesis 1 was accepted.

Table 3

Correlation analysis

	OSH knowledge	OSH needs	OSH improvement needs
OSH practices	.428** (p = .000)	.394** (p = .000)	.387** (p = .000)

** Correlation is significant at the 0.01 level (2-tailed)

4.4 OSH knowledge, OSH needs and OSH improvement needs influence OSH practices

Table 4 shows that the multiple regressions analysis was used to evaluate the influence of independent variables: OSH knowledge, OSH needs and OSH improvement needs towards the dependent variable (OSH practices). The model indicated that approximately 21.3 per cent (R square = 0.213) of the variance in OSH practices are jointly explained by the three independent variables: OSH knowledge, OSH needs and OSH improvement needs. The F value = 10.486 at $p < 0.000$ suggested that the three independent variables have significantly explained 21.3% of the variance in OSH practices. However, it was seen that only OSH knowledge has a significant influence with OSH practices at a 95 per cent confidence level with a standardized beta of 0.240 (OSH knowledge), where $p < 0.05$.

Table 4

Multiple Regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.887	.357		5.282	.000
OSH knowledge	.214	.110	.240	1.940	.055

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OSH needs	.148	.103	.164	1.438	.153
OSH improvement needs	.092	.094	.119	.984	.327

Note:

Dependent Variable: OSH practices

Predictors: (Constant), OSH knowledge, OSH needs and OSH improvement needs

R square = 0.213; F = 10.486; Sig = 0.000

5. Discussion and Conclusion

In this study, the results of the correlation test showed that there was a relationship between OSH knowledge, OSH needs and OSH improvement needs with OSH practices. Therefore, the findings of this study are consistent with findings by Prichard (2002), which shows that safety and health practices in an organization showed a positive relationship between OSH practices and the OSH knowledge, OSH needs and OSH improvement needs among the cleaning worker. These variables are aspects that should be cultivated as safety and health in the workplace are not considered as an option, but an obligation. Therefore, organizations should practice safety and health as the practice is a compliance to the Occupational Safety and Health Act 1994. This study's finding is also consistent with the findings of Dyjack and Levine (1996), which shows that positive OSH practices would ensure detection of the real cause of a problem, and thus it reduces accidents in the organization. Therefore, positive OSH practices play an important role in achieving a safety and health climate in the organization, such as increasing the OSH knowledge, OSH needs and OSH improvement needs to ensure the success of OSH practices.

The results of the regression analysis showed that OSH knowledge, OSH needs and OSH improvement needs influence 21.3% of OSH practices although only safety knowledge dominate this influence. Therefore, the findings of this study are consistent with Dennis & Gilbert (2008), which shows that the participation of the employees in promoting positive safety and health practices is a critical factor. Furthermore, Prichard (2002) found that the value of safety and health culture in an organization often reflects on how the management and the employees perceive it. If the safety and health programs in the organization are relevant and effectively implemented, and both the management and employees participate actively, then a safety and health culture can easily be created in the organization. However, Cheah (2007) showed that OSH practices should not be placed solely on the cleaning workers, but should be shared by all parties affecting the value chain of municipal solid waste, including the workers, the contractors, and the local government.

In conclusion, it is complicated to extend safety to different levels of people in term of age and experience in the organization. Some would have a positive perception on OSH practices and some do not know how to explain what safety is. It is revealed through the individual's experiences, knowledge of safety, and ways of thinking and behaviour of an employee. Therefore, it will be excellent when employees and management hold hands to find alternative to reduce accidents and illnesses in the workplace. Even communication about OSH must be more accommodating so that the updated information about OSH can be delivered to all employees.

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References

Beatriz F., Jose M. M., Camilo J. V. (2007). Safety culture: Analysis of the causal relationships between its key dimensions. Journal of Safety Research, 38 (6), 613-714.

Cheah Y. J. (2007). Construction safety and health factors at the industry level: The case of Singapore. *Journal of Construction in Developing Countries, 12 (2),3-18 .*

Clough, R.H. (1986). *Construction safety and health*. New York: John Wiley and Sons, Inc.

David, L. G. (2003). Construction safety and health. Washington, DC: Prentice Hall.

Dennis, G. W. & Gilbert, H. H. (2008). *Best practice in motivation and management in the classroom*. Thomas Publisher Ltd.

Dyjack, D.T. & Levine, S.P. (1996). Critical features of an IS0 9001/14001. *Harmonized health and safety assessment instrument*. AIHAJ, 57, 929- 935.

Guertin, S., Mellissa, M & Lavoie, J. (2002). *OSH in the MSW sector in Jamaica*, MSW Management Association, Jamaica.

Hemmingger, J. M. (2000). Food Safety: *A guide to what you really need to know/ prepared*. Ames, Iowa: Iowa State University Press.

Hislop, D. (2005). Knowledge management in organizations: *A critical Introduction.* Oxford University Press, Oxford, UK.

Holt, A.J. (2001). *Principles of construction safety*. Osney Mead, Oxford: Blackwell Science Ltd.

Lee L.T. (2000). Labour Day message: *Maintenance and safety culture in the country*, Kuala Lumpur. Retrieved from http://www.niosh.com.my/info

Mazouz, G.N. (2008). *Internet and the flow of knowledge*. New Brunswik: National Publisher Services.

O'Brien, C. & McIlwain, L. (1994). *Tackling Trash*. OH & S Canada. 10(1):36-42.

Ormrod, J.E. (1999). *Human learning (3rd edition)*. Upper Saddle River, NJ: Prentice-Hall.

Prichard, R. (2002). *The value of safety*. International Risk Management Institute, Inc.

Prichard, R. (2004). *Owner safety leadership*. International Risk Management Institute, Inc.

Seeley, L. H. (1996) *Building Economics*. 4th edition, London: Macmillan Press Ltd.

Sekaran, U. & Bougie, R. (2013). Research methods for business: A skill-building approach (6th ed.). Chichester, West Sussex, United Kingdom: John Wiley & Sons Ltd.

Stranks, J. (1994). *Human factors and safety*. Glasgow : Bell and Bain Ltd.